March 16, 1937. A. GROTH 2,074,053

PILE WIRE SPOON WITH EXCHANGEABLE BLADE

Filed Sept. 19, 1935

Fig. 1

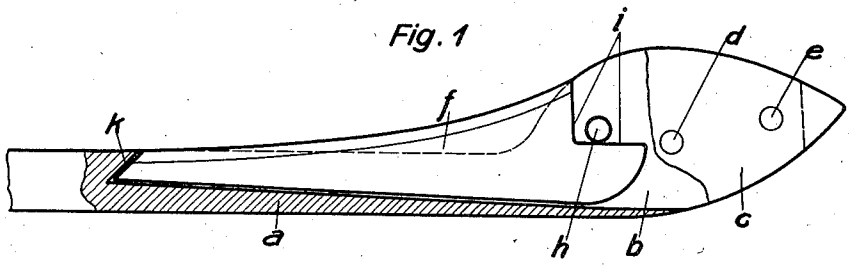


Fig. 2

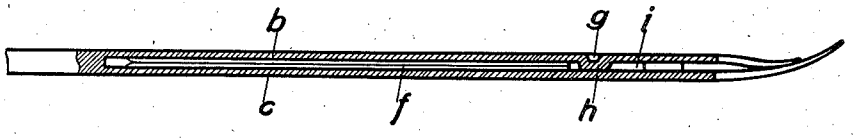
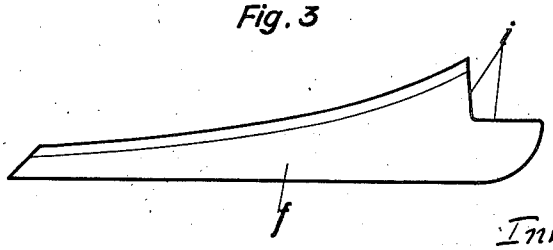


Fig. 3



Inventor:
Alfred Groth
by Jerry C. Hennion
Attorney.

Patented Mar. 16, 1937

2,074,053

UNITED STATES PATENT OFFICE

2,074,053

PILE WIRE SPOON WITH EXCHANGEABLE BLADE

Alfred Groth, Gera, Germany

Application September 19, 1935, Serial No. 41,193
In Germany September 19, 1934

2 Claims. (Cl. 139—44)

This invention relates to improvements in double-walled pile wire spoons and holders for exchangeable cutting blades, and it is the principal object of my invention to provide a holder of simple and inexpensive construction, yet durable and highly efficient in use.

Double-walled pile wire spoons and holders for exchangeable cutter blades are known, in which the blade can be turned, however, such spoons or blade holders are comparatively expensive because one or both walls of the spoon must be specially formed or shaped, and made in sizes to suit the form and size of the blades. The same is true with respect to blade holders in which the blade is adjustable in the direction of its longitudinal axis, or can be turned within the spoon about its front or rear end to allow an adjustment in height.

It is furthermore also known to specially secure the blade after its introduction into the spoon head to the same by means of a specially constructed tool, in such case however the blade must be left moldable at this particular spot, and to return the blade into its original shape by means of another tool by the use of which it is properly shaped for removal from the spoon.

Expensive dies and pressure or other tools or the like are required to manufacture such spoons, and blades of complicated forms with the result that the expenses of the manufacture become exorbitant. In special cases furthermore the use of suitable tools becomes necessary for the introduction and removal of the blades into and from the spoon.

The present invention has for its object the provision of a pile wire spoon or blade holder with an exchangeable blade avoiding the above enumerated disadvantages, and it is the principal object of my invention to provide a spoon having the inner face of one of its two walls provided with a protuberance, a projection, an abutment or rivet head or the like corresponding in height to the thickness of the blade, entirely or partly, and which, when the blade is introduced into the holder engages a recess or stepped part of the blade to hold the blade stationary within the holder.

The formation of this protuberance, abutment etc. at one of the inner walls of the holder or spoon can be effected in various ways, either by punching the material of the holder correspondingly inward, or by the provision of a projection on these walls, or by the arrangement of an abutment by means of solder, welding or riveting etc.

The most simple manner of producing such a member would be by bulging the material of the spoon wall inwardly by a punch from the outside to form this inner protuberance which engages a recess or stepped part or portion of the blade when the same is introduced into the holder and which thus holds the blade securely in its position within the holder.

In this manner any damage to the blade when it is introduced into the holder or removed therefrom, is avoided, so that it will be possible to exchange the blade as often as desired and to make the same again usable by re-grinding, which has not been possible with the known means of securing the blade within the spoon heads.

These and other objects and advantages of my invention will become more fully known as the description thereof proceeds and will then be specifically defined in the appended claims.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 illustrates a spoon head or blade holder constructed according to my invention, partly in section and on a somewhat enlarged scale.

Fig. 2 is a horizontal section thereof, and

Fig. 3 is a detail view of a blade.

As illustrated, the spoon head or blade-holder *a* is composed of the usual side walls *b* and *c* forming together a substantially U-shaped body. The side walls are firmly united by rivets *d* and *e* or the like at their separated and pointed front ends. Rivet *d* however, leaves between the side walls a space sufficient for the introduction and removal of the blade *f*.

According to my invention, one of the side walls *b* or *c* only, for instance as shown, side wall *b* has the material thereof punched inwardly from the outside, to form an inner protuberance *h* and an outer depression *g*. The inner protuberance *h* has a thickness of material which extends to the wall *c* and is adapted to engage the blade *f* when introduced between both walls of the holder; the blade *f* is for this purpose provided with a suitable cut-away or stepped portion *i*.

When the blade is introduced into the holder or spoon, its rear end opposite to the end having the cut-away part is engaged behind a shoulder *k*, and when the blade is then pressed into the open space between the two walls *b* and *c* until its cut-away portion *i* is engaged by the protuberance *h*, the blade will be firmly held in position

between both, the shoulder *k*, and the abutment *h*.

The operation of my improved blade holder will be entirely clear from the above description by having simultaneously reference to the drawing.

It will be understood that I do not desire to limit myself to the exact construction shown and described as an example, but that I may make such changes therein as come within the scope of the appended claims without departure from the spirit of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent is:

1. Blade holder or spoon for pile wires with exchangeable blades comprising two spaced resilient walls, rivets connecting said walls at their front ends, one of said rivets spacing said walls from one another, and one of said walls formed with a depression in the material of its outside forming an inner projection filling the space between both walls, a blade adapted to be introduced between both walls and formed with a cut-away portion to be engaged by said projection, and a shoulder formed in the holder adapted to be engaged by the opposite end of the blade.

2. In a blade holder of the character described, two side walls forming a body of substantial U-shape in cross-section, rivets connecting the front ends of said walls, one of said walls having its material punched from the outside towards the inside to form an inner protuberance and an outer depression, one of said rivets spacing said walls from one another, and a blade having a cut-away end portion and being adapted to be introduced into the space between both walls and removed therefrom, said blade adapted to be engaged by said protuberance, a shouldered portion formed on said blade against which said protuberance engages, and an inclined shoulder formed with said walls to be engaged by the cut-away end portion of said blade.

ALFRED GROTH.